

BIG STONE II

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PROGRAM

June 20, 2006

Mr. Kyrík Rombough
Air Quality Program
South Dakota Department of Environment
and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

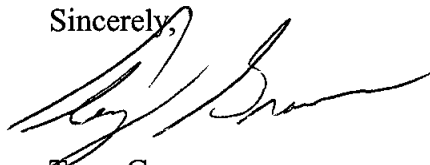
Dear Kyrík:

Subject: Draft PSD Construction Permit for Construction
For Big Stone II

Enclosed are Otter Tail Power Company's comments on the Draft
Prevention of Significant Deterioration (PSD) Permit for the Construction
of Big Stone II.

Please contact me if you have any questions.

Sincerely,



Terry Graumann
Manager, Environmental Services

Enclosures

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OTTER TAIL POWER COMPANY, LEAD DEVELOPER
MINNESOTA MUNICIPAL POWER AGENCY
MISSOURI RIVER ENERGY
HEARTLAND CONSUMERS POWER DISTRICT
MISSOURI RIVER ENERGY SERVICES
MONTANA-DAKOTA UTILITIES CO.
SOUTHERN MINNESOTA MUNICIPAL POWER AGENCY

Otter Tail Power Company

Comments on Big Stone II draft Permit #28.0803-PSD

The following are Otter Tail Power Company's comments on the Draft Prevention of Significant Deterioration (PSD) Permit for Construction of Big Stone II as enclosed with your April 13, 2006 letter to Terry Graumann.

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Please identify the following plant owners:

Central Minnesota Municipal Power Agency

Great River Energy

Heartland Consumers Power District

Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc.

Otter Tail Corporation dba Otter Tail Power Company

Southern Minnesota Municipal Power Agency

Western Minnesota Municipal Power Agency

Please identify Otter Tail Power Company as the Operator.

Permit Section 1.1

Otter Tail suggests that "as updated" be added following "July 20, 2005" in the fifth line of the first paragraph.

Table 1 – Please add "low NO_x burners" to the list of control devices for emissions unit #13. Please also add the Unit # 16 cooling tower drift eliminator efficiency of 0.0005%. The operating rate for unit #24 should be 11 tons per hour.

Permit Section 3.4

Otter Tail suggests insertion of the following wording after at the end of the first sentence "(i.e. when permanent structure is installed."

Permit Section 3.6

Please clarify the submittal of the first quarterly report. Otter Tail suggests that the first quarterly report be submitted at the end of the calendar quarter following initial startup notification as prescribed in Section 3.5.

Permit Section 4.1

Table 2 – Please revise the title of Table 2 to read as follows: “PM10 BACT/Visibility Emission Limits”

Please revise footnote 2 as follows:

If the initial testing demonstrates an emission rate less than 0.03 pounds per million Btu's (filterable and condensable), the emission limit shall be lowered to the mean emission rate achieved following two additional successive annual during the performance tests plus two standard deviations of the nine test runs ~~multiplied by 1.1~~ or 0.018 pounds per million Btus, whichever is greater.

Footnote number 1 to Table 2 bases compliance with the PM10 emission limit on the average of three test runs. Based on footnote 2, the filterable and condensable emission limit will be lowered to the emission rate achieved during the performance test to the greater of the performance test result multiplied by 1.1 or 0.018 pounds per million Btu if the tested emission rate is less than 0.03 pounds per million Btu.

A multiplication factor of 1.1 does not allow a great enough margin to account for long-term unit operational variability or variability of test methodology. Operational and test method variability needs to be considered when establishing emission limits that form the basis of on-going future compliance. Otter Tail has few test results on particulate emissions following installation of the Advanced Hybrid® technology at Big Stone Plant. However, several years of data are available from Coyote Station which illustrates the variability of particulate emission data. Coyote Station is a cyclone-fired unit that burns North Dakota lignite. Its particulate emissions are controlled with a fabric filter. The following table provides particulate emissions test results for years 2001 through 2003. Test procedures followed EPA Method 5 for filterable particulate matter and Method 202 wet catch for the condensable particulate. If the median particulate filterable and condensable value was selected as the basis for evaluating future compliance, Coyote Station would have met the emission limitation in 2002 only when using a factor of 1.6. If the lowest particulate filterable and condensable value was selected as the basis for evaluating future compliance, Coyote Station would have not have met the emission limitation in any of the ensuing years.

Date	Load (MW)	PM (filterable) Lbs/mmBtu	PM (filterable and condensable) Lbs/mmBtu
8/8 and 9/2001	425	0.0178	0.0310
7/24/02	425	0.020	0.085
7/30/03	423	0.018	0.051

Permit Section 4.2

Since permit section 8.1 requires installation of a carbon monoxide CEMS, please revise Table 3 to reflect compliance with the carbon monoxide limit for Unit #13 based on a 30-day rolling average and Unit #'s 14 and 15 based on the average of three test runs.

Permit Section 4.3

Table 4 – For model year 2007-2010 engines meeting the size of the generator and fire pump, the NSPS limit as proposed in Subpart IIII of Part 60 of the July 11, 2005 *Federal Register* limits emissions to the sum of the VOC and NOx which are 4.8 and 3.0 grams per horsepower-hour for the generator and fire pump, respectively (page 39875 Table 1). Since the BACT limit requires compliance based on the sum of the VOC and the NOx emission rates and since BACT cannot be any less stringent than the NSPS limit, please modify Table #4 by including the NSPS emission limit as BACT for Unit #14 and Unit #15.

Please also include a statement that the BACT limit may be modified by an administrative permit amendment upon finalization of the NSPS Subpart IIII limit.

Permit Section 4.5

Table 6 – Replace footnote 1 with the following: Compliance with the emission limit is based on the average of three test runs.

The suggested revision is consistent with a compliance determination based on EPA test methodology.

Permit Division 5.0

Please add a new section entitled “New source performance standards for Unit #14 and Unit #15”.

Otter Tail suggests the following additional wording:

“On July 11, 2005, EPA proposed Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (70 *Federal Register* July 11, 2005 39870). Unless revised by EPA during the final rulemaking, the standards as proposed would apply to the fire pump (Unit #14) and the diesel generator (Unit #15). The following table specifies the emission rates for Unit #14 and Unit #15 based on the proposed emission rates as referenced in Table 1 page 39870 of the preamble to the proposed rule. The limit was based on model year 2007-2010 engines meeting the size of the generator and fire pump. The permit conditions may be modified by an administrative permit amendment upon finalization of the NSPS Subpart IIII requirements.”

Unit	Description	NMHC + NOx (g/HP-hr)	CO (g/HP-hr)	PM (g/HP-hr)
#14	Fire pump	3.0	2.6	0.15
#15	Generator	4.8	2.6	0.15

Permit Section 5.1

Please replace “September 18, 1978” with “February 28, 2005 as promulgated by EPA in the February 27, 2006 *Federal Register*.” The following comments address references to the revised NSPS emissions limits as included in the February 27, 2006 *Federal Register*.

Please revise the first line in condition number 2 as follows:

“In accordance with 40 CFR §§ ~~60.42a(a)(1) and 60.48a(e)~~ 60.42Da(a) and 60.42Da(c)(1) or 60.42Da(c)(2)...”

Please revise the first line in condition number 3 as follows:

“In accordance with 40 CFR §§ ~~60.43Da(a), 60.43a(g) and 60.48a(e)~~ and 60.43Da(i)(1)(i) or (ii)...”

Please revise the first line in condition number 4 as follows:

“In accordance with 40 CFR §§ ~~60.44a(d)(1) and 60.48a(e)~~ 60.44Da(a) and 60.44Da(e)(1)...”

Please revise the first line in condition number 5 as follows:

“In accordance with 40 CFR §§ ~~60.45a(a)(1)~~ 60.45Da(a) and 60.45Da(a)(2)(i) and 60.48a(e)...”

Permit Section 5.2

In the fourth line of the paragraph, please replace “Training” with “Trading.”

Permit Section 5.5

Table 8 - Replace footnote 1 with the following: Compliance with the emission limit is based on the average of three test runs.

The suggested revision is consistent with a compliance determination based on EPA test methodology.

Permit Section 5.7

Please add bio-diesel, in addition to distillate oil, to the description of the fuels in the paragraph.

Permit Section 6.12

Please revise the second sentence in paragraph number 2 to read:

“Distillate oil means fuel oil or bio-diesel that complies with the specifications for fuel oil numbers 1 or 2.”

Permit Section 6.13

Revise statement No. 3 to read as follows: A statement that the sulfur content of the oil does not exceed ~~0.015~~ 0.05 weight percent sulfur.

The suggested revision is consistent with the sulfur limit as set forth in Section 5.7.

Please revise the second sentence in paragraph number 2 to read:

“Distillate oil means fuel oil or bio-diesel that complies with the specifications for fuel oil numbers 1 or 2.”

The following are Otter Tail Power Company’s comments on the Statement of Basis.

Statement of Basis Section 2.2

Please add low NO_x burners to the list of emission control equipment for Unit # 13.2

Statement of Basis Section 4.0

The coal and limestone rates as described in Section 4.0 are the annual average rates of the equipment as noted in the PSD application rather than the equipment design rate.